

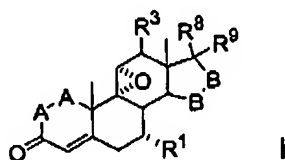
PHA 4199.1(3090/7/US)

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

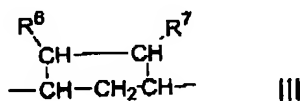
Claims 1-65. (cancelled).

Claim 66. (currently amended) A process for the formation of a compound of Formula I:



wherein -A-A- represents the group $-\text{CHR}^4-\text{CHR}^5-$ or $-\text{CR}^4=\text{CR}^5-$;

-B-B- represents the group $-\text{CHR}^6-\text{CHR}^7-$ or an alpha- or beta-oriented group of Formula III:



R^1 represents an α -oriented lower alkoxy carbonyl or hydroxycarbonyl radical;

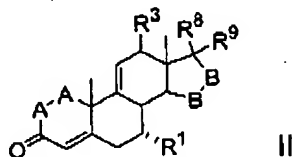
R^3 , R^4 and R^5 are independently selected from the group consisting of hydrogen, halo, hydroxy, lower alkyl, lower alkoxy, hydroxyalkyl, alkoxyalkyl, hydroxy carbonyl, cyano, and aryloxy;

R^6 and R^7 are independently selected from the group consisting of hydrogen, halo, lower alkoxy, acyl, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkyl, alkoxy carbonyl, acyloxyalkyl, cyano, and aryloxy; and

R^8 and R^9 are independently selected from the group consisting of hydrogen, hydroxy, halo, lower alkoxy, acyl, hydroxyalkyl, alkoxyalkyl, hydroxycarbonylalkyl, alkoxy carbonylalkyl, acyloxyalkyl, cyano, and aryloxy, or R^8 and R^9 together comprise a carbocyclic or heterocyclic ring structure, or R^8 or R^9 together with R^6 or R^7 comprise a carbocyclic or heterocyclic ring structure fused to the pentacyclic D ring;

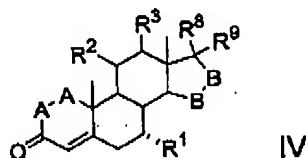
PHA 4199.1(3090/7/US)

the process comprising epoxidizing ~~converting~~ a compound of Formula II to a compound of Formula I, said compound of Formula II having the structure:



wherein -A-A-, -B-B-, R¹, R³, R⁸ and R⁹ are as defined above;

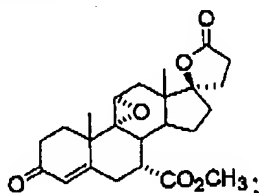
wherein preparation of said compound of Formula II comprises is prepared by eliminating a leaving group from ~~converting~~ a compound of Formula IV to a compound of Formula II, said compound of Formula IV having the structure:



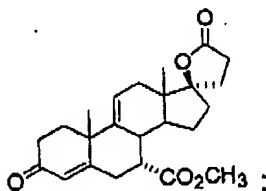
wherein -A-A-, -B-B-, R¹, R³, R⁸ and R⁹ are as defined above, and R² is a leaving group the abstraction of which is effective for generating a double bond between the 9- and 11-carbon atoms.

Claim 67. (cancelled)

Claim 68. (previously presented) A process as set forth in claim 66 wherein said compound of Formula I is:

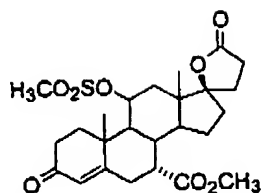


said compound of Formula II is:

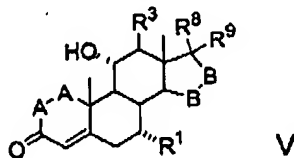


and said compound of Formula IV is:

PHA 4199.1(3090/7/US)



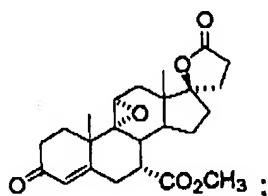
Claim 69. (currently amended) A process as set forth in claim 66 wherein preparation of the compound of Formula IV comprises ~~is prepared by~~ esterifying or halogenating ~~converting~~ a compound of Formula V to a compound of Formula IV, said compound of Formula V having the structure:



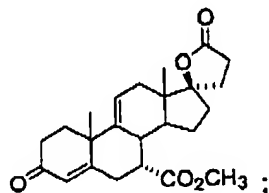
wherein -A-A-, -B-B-, R¹, R³, R⁸ and R⁹ are as defined in claim 66.

Claims 70. -71. (cancelled)

Claim 72. (previously presented) The process of claim 69 wherein said compound of Formula I is:

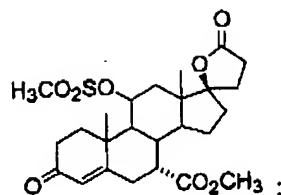


said compound of Formula II is:

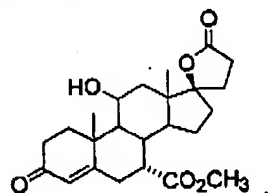


said compound of Formula IV is:

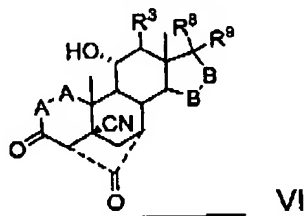
PHA 4199.1(3090/7/US)



and said compound of Formula V is:



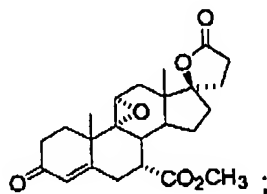
Claim 73. (currently amended) A process as set forth in claim 69 wherein preparation of the compound of Formula V comprises ~~is prepared by reacting~~ converting a compound of Formula VI with a metal alkoxide ~~to a compound of~~ Formula V, said compound of Formula VI having the structure:



wherein -A-A-, -B-B-, R^3 , R^8 and R^9 are as defined in claim 69.

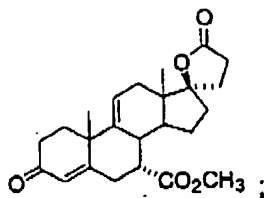
Claim 74. (cancelled)

Claim 75. (currently amended) The process of claim 73 wherein said compound of Formula I is:

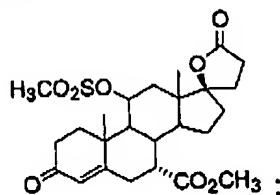


said compound of Formula II is:

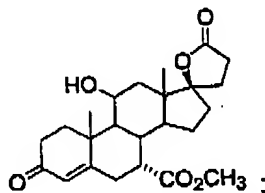
PHA 4199.1(3090/7/US)



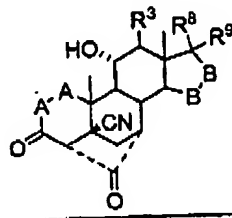
said compound of Formula IV is:



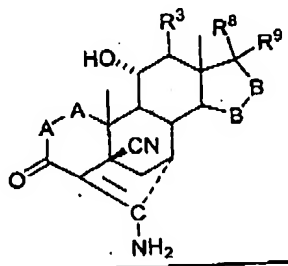
said compound of Formula V is:



and said compound of Formula VI is:



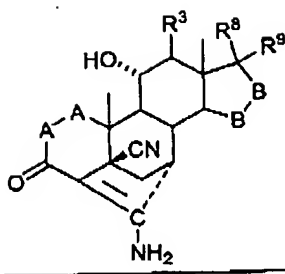
Claim 76. (currently amended) A process as set forth in claim 73 wherein preparation of the compound of Formula VI ~~is prepared by~~ comprises hydrolyzing ~~converting~~ a compound of Formula VII ~~to a compound of Formula~~ VI, said compound of Formula VII having the structure:



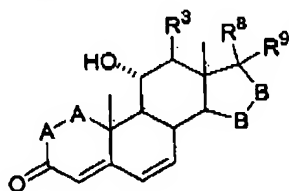
viii

wherein -A-A-, -B-B-, R³, R⁸ and R⁹ are as defined in claim 73.

PHA 4199.1(3090/7/US)



Claim 79. (currently amended) A process as set forth in claim 76 wherein preparation of the compound of Formula VII comprises ~~is prepared by~~ cyanidating ~~converting~~ a compound of Formula VIII ~~to a compound of Formula VII~~, said compound of Formula VIII having the structure:

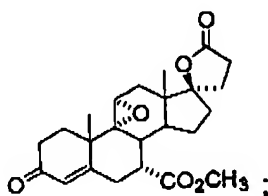


VIII

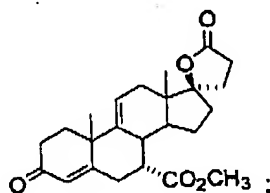
wherein -A-A-, -B-B-, R³, R⁸ and R⁹ are as defined in claim 76.

Claims 80. – 81. (cancelled)

Claim 82. (currently amended) A process as set forth in claim 79 wherein said compound of Formula I is:

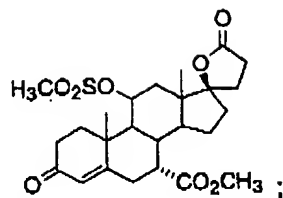


said compound of Formula II is:

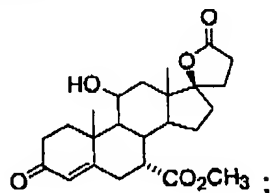


said compound of Formula IV is:

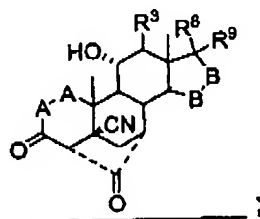
PHA 4199.1(3090/7/US)



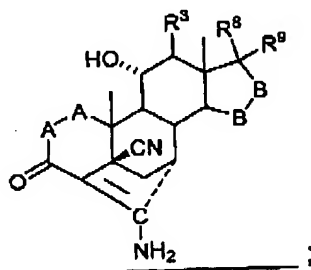
said compound of Formula V is:



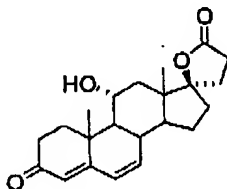
said compound of Formula VI is:



said compound of Formula VII is:

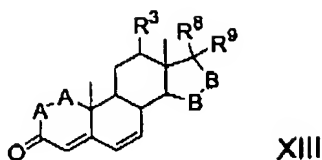


and said compound of Formula VIII is:



Claim 83. (currently amended) A process as set forth in claim 79 wherein preparation of the compound of Formula VIII comprises ~~is prepared by~~ hydroxylating ~~converting~~ a compound of Formula XIII ~~to a compound of~~ Formula VIII, said compound of Formula XIII having the structure:

PHA 4199.1(3090/7/US)

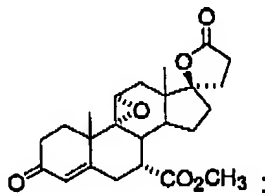


XIII

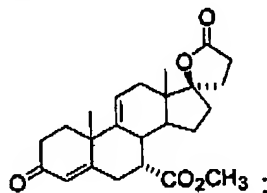
wherein -A-A-, -B-B-, R^3 , R^8 and R^9 are as defined in claim 79.

Claims 84. - 85 (cancelled)

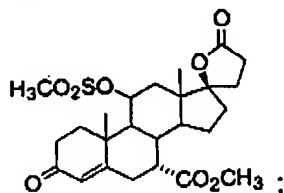
Claim 86. (currently amended) A process as set forth in claim 83 wherein said compound of Formula I is:



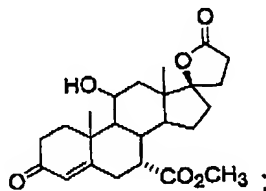
said compound of Formula II is:



said compound of Formula IV is:

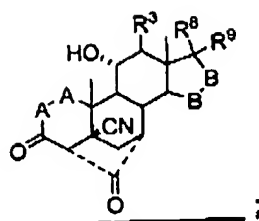


said compound of Formula V is:

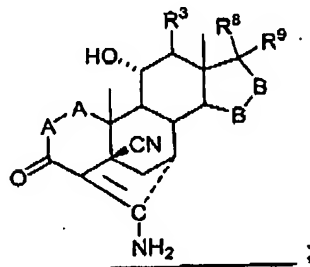


said compound of Formula VI is:

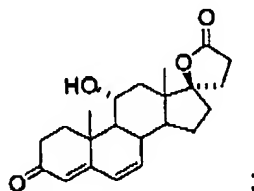
PHA 4199.1(3090/7/US)



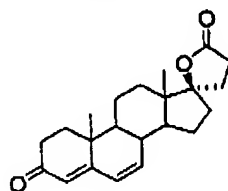
said compound of Formula VII is:



said compound of Formula VIII is:



and said compound of Formula XIII is:



Claims 87. – 93. (cancelled)

Claim 94. (currently amended) A process as set forth in claim 66 wherein said epoxidation conversion of a compound of Formula II to a compound of Formula I is effected by comprises contacting an epoxidizing reagent with a compound of Formula II.

Claim 95. (currently amended) A process as set forth in claim 66 wherein elimination of said leaving group from conversion of a compound of Formula

PHA 4199.1(3090/7/US)

IV to ~~form~~ a compound of Formula II is effected by comprises removing an 11 α -leaving group from a compound of Formula IV.

Claim 96. (currently amended) A process as set forth in claim 69 wherein said esterification or halogenation ~~conversion~~ of a compound of Formula V to a compound of Formula IV is effected by comprises reacting a lower alkylsulfonylating or acylating reagent or a halide generating agent with a compound of Formula V.

Claim 97. (currently amended) A process as set forth in claim 73 wherein said reaction ~~conversion~~ of a compound of Formula VI with a metal alkoxide to a compound of Formula V is effected by comprises reacting a compound of Formula VI with an alkali metal alkoxide corresponding to the formula R¹⁰OM wherein M is alkali metal and R¹⁰O- corresponds to the alkoxy substituent of R¹.

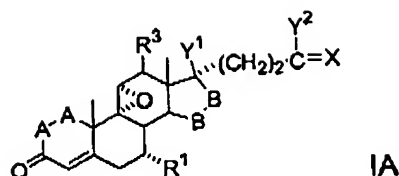
Claim 98. (cancelled) A process as set forth in claim 76 wherein said ~~conversion of a compound of Formula VII to a compound of Formula VI is effected by hydrolyzing a compound of Formula VII.~~

Claim 99. (currently amended) A process as set forth in claim 79 wherein said cyanidation ~~conversion~~ of a compound of Formula VIII to a compound of Formula VII is effected by comprises reacting a source of cyanide ion in the presence of an alkali metal salt with a compound of Formula VIII.

Claim 100. (currently amended) A process as set forth in claim 83 wherein said hydroxylation ~~conversion~~ of a compound of Formula XIII to a compound of Formula VIII is effected by comprises oxidizing a compound of Formula XIII by fermentation in the presence of a microorganism effective for introducing an 11-hydroxy group into said substrate in α -orientation.

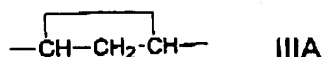
Claim 101. (currently amended) A process for the formation of a compound of Formula IA:

PHA 4199.1(3090/7/US)



wherein -A-A- represents the group $-\text{CH}_2-\text{CH}_2-$ or $-\text{CH}=\text{CH}-$;

-B-B- represents the group $-\text{CH}_2-\text{CH}_2-$ or an alpha- or beta- oriented group of Formula IIIA:



R^1 represents an alpha-oriented lower alkoxy carbonyl radical;

X represents two hydrogen atoms or oxo;

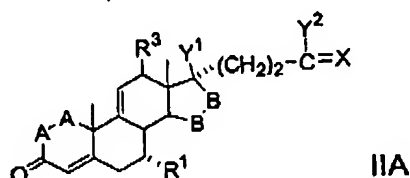
Y^1 and Y^2 together represent the oxygen bridge $-\text{O}-$, or

Y^1 represents hydroxy, and

Y^2 represents hydroxy, lower alkoxy or, if X represents H_2 , also lower alkanoyloxy;

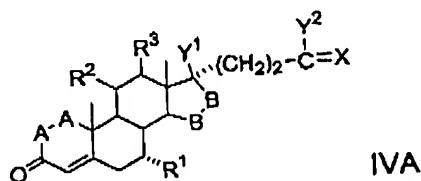
and salts of compounds in which X represents oxo and Y^2 represents hydroxy;

the process comprising epoxidizing ~~converting~~ a compound of Formula IIA to a compound of Formula IA, said compound of Formula IIA having the structure:



wherein -A-A-, -B-B-, R^1 , R^3 , X, Y^1 and Y^2 are as defined above;

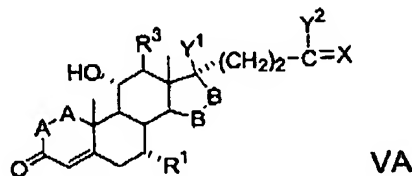
wherein formation of said compound of Formula IIA is ~~formed by~~ comprises eliminating a leaving group from ~~converting~~ a compound of Formula IVA to a compound of Formula IIA, said compound of Formula IVA having the structure:



PHA 4199.1(3090/7/US)

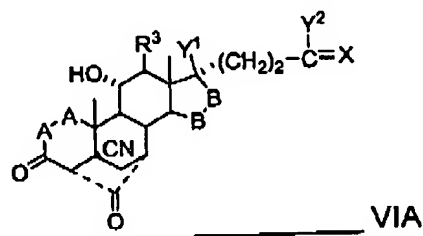
wherein -A-A-, -B-B-, R^1 , R^3 , X, Y^1 and Y^2 are as defined above, and R^2 represents lower alkylsulfonyloxy or acyloxy; and

wherein formation of said compound of Formula IVA is ~~formed by~~ comprises esterifying or halogenating ~~converting~~ a compound of Formula VA ~~to a compound of Formula IVA~~, said compound of Formula VA having the structure:



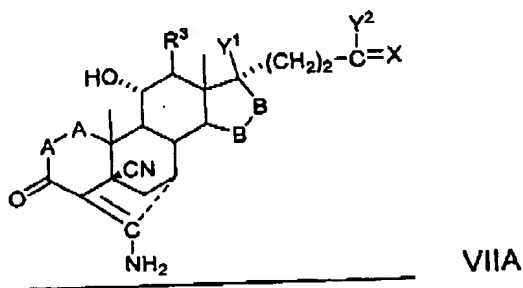
wherein -A-A-, -B-B-, R^1 , R^3 , X, Y^1 and Y^2 are as defined above;

wherein formation of said compound of Formula VA is ~~formed by~~ comprises reacting ~~converting~~ a compound of Formula VIA with a metal alkoxide ~~to a compound of Formula VA~~, said compound of Formula VIA having the structure:



wherein -A-A-, -B-B-, R^3 , X, Y^1 and Y^2 are as defined above; and

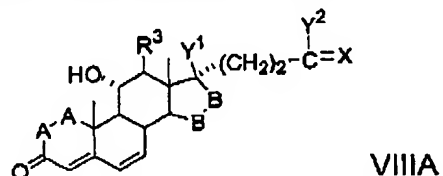
wherein formation of said compound of Formula VIA is ~~formed by~~ comprises hydrolyzing ~~converting~~ a compound of Formula VIIA to a compound of Formula VIA, said compound of Formula VIIA having the structure:



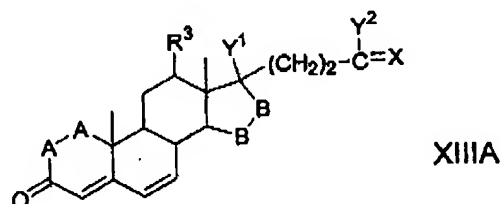
wherein -A-A-, -B-B-, R^3 , X, Y^1 and Y^2 are as defined above; and

PHA 4199.1(3090/7/US)

wherein formation of said compound of Formula VIIA is ~~formed by~~
~~cyanidating~~ ~~converting~~ a compound of Formula VIIA to ~~form~~ a compound of
 Formula VIIA, said compound of Formula VIIA having the structure:



wherein -A-A-, -B-B-, R^3 , X, Y^1 and Y^2 are as defined above; and
 wherein formation of said compound of Formula VIIA is ~~formed by~~
~~comprises hydroxylating~~ ~~converting~~ a compound of Formula XIII A to ~~form~~ a
~~compound of Formula VIIA~~, said compound of Formula XIII A having the
 structure:



wherein -A-A-, -B-B-, R^3 , X, Y^1 and Y^2 are as defined above.